



PATENT
Attorney Docket No. NAS-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Sanders
SERIAL NO.: 10/664,408 GROUP NO.: Not yet assigned
FILING DATE: September 17, 2003 EXAMINER: Not yet assigned
TITLE: Electrochemical Generation, Storage and Reaction of Hydrogen and Oxygen

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. In accordance with the U.S. Patent Office's partial waiver of the requirement under 37 C.F.R. 1.98(a)(2)(i), only copies of the foreign patent documents and non-patent publications are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**
- ☐ the requisite fee under 37 C.F.R. 1.17(p), namely **\$180.00**, is included herein, or

- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, **AND**
- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **\$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:

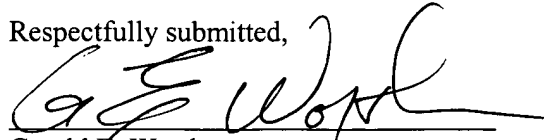
- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Date: December 9, 2003
Reg. No. 45,238

Tel. No.: (617) 310-8176
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2722758

Respectfully submitted,



Gerald E. Worth
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PATENT
Attorney Docket No. NAS-001(9347/2)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Sanders
SERIAL NO.: 10/664,408 GROUP NO.: Not yet assigned
FILING DATE: September 17, 2003 EXAMINER: Not yet assigned
TITLE: Electrochemical Generation, Storage and Reaction of Hydrogen and Oxygen

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence, and any document(s) referred to as enclosed herein, is/are being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 9th day of December, 2003.


Heather Morgan


Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

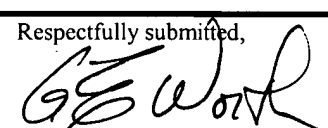
Submitted herewith is/are:

- 1) Transmittal Form (1 pg.);
- 2) Information Disclosure Statement (2 pgs.);
- 3) Form PTO-1449 (3 pgs.);
- 4) Copies of references (C1-C11); and
- 5) Return receipt postcard.

All Submitted under this Certificate of First Class Mailing Under 37 C.F.R. § 1.8.

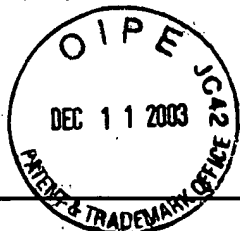
 <h1 style="margin: 0;">TRANSMITTAL FORM</h1>	Application Serial Number	10/664,408
	Filing Date	September 17, 2003
	First Named Inventor	Sanders
	Group Art Unit	Not Yet Assigned
	Examiner Name	Not Yet Assigned
	Attorney Docket No.	NAS-001 (9347/2)

ENCLOSURES <i>(check all that apply)</i>		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Check Attached <input type="checkbox"/> Copy of Fee Transmittal Form <input type="checkbox"/> Amendment/Response <input type="checkbox"/> Preliminary <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Letter to Official Draftsperson including Drawings [Total Sheets _____] <input type="checkbox"/> Petition for Extension of Time <input checked="" type="checkbox"/> Information Disclosure Statement <input checked="" type="checkbox"/> Form PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Sequence Listing submission <input type="checkbox"/> Paper Copy/CD <input type="checkbox"/> Computer Readable Copy <input type="checkbox"/> Statement verifying identity of above	<input type="checkbox"/> Copy of Notice to File Missing Parts of Application (PTO-1553) <input type="checkbox"/> Formal Drawing(s) <input type="checkbox"/> Request For Continued Examination (RCE) Transmittal <input type="checkbox"/> Power of Attorney (Revocation of Prior Powers) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Executed Declaration and Power of Attorney for Utility or Design Patent Application <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> CD(s) for large table or computer program <input type="checkbox"/> Amendment After Allowance <input type="checkbox"/> Request for Certificate of Correction <input type="checkbox"/> Certificate of Correction (in duplicate)	<input type="checkbox"/> Notice of Appeal to Board of Patent Appeals and Interferences <input type="checkbox"/> Appeal Brief (in triplicate) <input type="checkbox"/> Status Inquiry <input checked="" type="checkbox"/> Return Receipt Postcard <input checked="" type="checkbox"/> Certificate of First Class Mailing under 37 C.F.R. 1.8 <input type="checkbox"/> Certificate of Facsimile Transmission under 37 C.F.R. 1.8 <input type="checkbox"/> Additional Enclosure(s) <i>(please identify below)</i> <input type="checkbox"/> Transmittal of Formal Drawings Petition Under 37 C.F.R. § 1.182

CORRESPONDENCE ADDRESS	SIGNATURE BLOCK
Direct all correspondence to: Patent Administrator Testa, Hurwitz & Thibault, LLP High Street Tower 125 High Street Boston, MA 02110 Tel. No.: (617) 248-7000 Fax No.: (617) 248-7100	Date: December 9, 2003 Reg. No. 45,238 Tel. No.: (617) 310-8176 Fax No.: (617) 248-7100 <div style="text-align: right;"> Respectfully submitted,  Gerald E. Worth Attorney for Applicant Testa, Hurwitz & Thibault, LLP High Street Tower 125 High Street Boston, MA 02110 </div>

FORM PTO - 1449

INFORMATION DISCLOSURE STATEMENT



ATTORNEY DOCKET NO.: NAS-001

APPLICANT(S): Sanders

SERIAL NO.: 10/664,408

FILING DATE: September 17, 2003

GROUP NO: Not yet assigned

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	3,577,324	05/04/71	Patterson	204	20	
	A2	3,632,496	01/04/72	Patterson et al.	204	249	
	A3	3,899,351	08/12/75	Maurer et al.	136	34	
	A4	4,211,537	07/08/80	Teitel	48	191	
	A5	4,302,217	11/24/81	Teitel	48	180	
	A6	4,336,226	06/22/82	Christensen	422	109	
	A7	4,430,391	02/7/84	Ovshinsky et al.	429	40	
	A8	4,431,561	02/14/84	Ovshinsky et al.	252	184	
	A9	4,487,818	12/11/84	Ovshinsky et al.	429	44	
	A10	4,623,597	11/18/86	Sapru et al.	429	101	
	A11	4,637,990	01/20/87	Torobin	502	10	
	A12	4,793,980	12/27/88	Torobin	423	213.5	
	A13	4,943,355	07/24/90	Patterson	204	20	
	A14	5,036,031	07/30/91	Patterson	502	10	
	A15	5,096,667	03/17/92	Fetcenko	420	580	
	A16	5,104,617	04/14/92	Fetcenko et al.	420	588	
	A17	5,135,589	08/04/92	Fetcenko et al.	148	442	
	A18	5,277,998	01/11/94	Furukawa et al.	429	59	
	A19	5,292,557	03/08/94	Olson	427	437	
	A20	5,318,675	06/07/94	Patterson	204	86	
	A21	5,348,822	09/20/94	Ovshinsky et al.	429	223	
	A22	5,376,474	12/27/94	Tadokoro et al.	429	59	
	A23	5,384,210	01/24/95	Furukawa	429	59	

[illegible]

FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT		ATTORNEY DOCKET NO.: NAS-001 APPLICANT(S): Sanders SERIAL NO.: 10/664,408 FILING DATE: September 17, 2003 GROUP NO: Not yet assigned
OTHER ART, JOURNAL ARTICLES, ETC.		
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
	C1	Battery Technologies, Inc., http://www.bti.ca/ramcon.htm , printed December 8, 2001, 3 pages
	C2	Colossus, http://colossus.chem.umass.edu/chandler/ch112/cells.htm , printed December 8, 2002, 6 pages.
	C3	Kopera, John C., "Inside the Nickel Metal Hydride Battery", Texaco Ovonic Battery Systems LLC, 15 pages, July 25, 2002.
	C4	Huanyubattery, http://hyper.net.cn/know/12.htm , printed November 14, 2002, 3 pages.
	C5	Moltech, http://www.moltech.com/techdata/appmanuals/NiMH Application Manual.asp , printed November 14, 2002, 22 pages.
	C6	Nelson, Robert, "The Basic Chemistry of Gas Recombination in Lead-Acid Batteries", JOM, http://www.tms.org/pubs/journals/JOM/0101/Nelson-0101.html , pp.28-33, printed October 30, 2002.
	C7	Panasonic, "Nickel Metal Hydride Handbook", 5 pages, February 2002
	C8	Saft Automotive, http://www.saftbatteries.com/automotive/uk/datasheet/d2_3.htm , printed December 8, 2002, 2 pages
	C9	Granta Design, http://www.grantadesign.com/solutions/metalfoams.htm , printed November 25, 2002, 3 pages.
	C10	Munehisa Ikoma, Shinji Hamada, Nobuyasu Mishita, Yasuko Hoshina, Hiromu Matsuda, Kazuhiro Ohta, Tadao Kimura, "Development of a Nickel/Metal Hydride Battery (NI/MH) System for EV Application", The Electrochemical Society Proceedings Volume 94-27, pp 370-380, (September 14, 2002).
	C11	Lipka, Steven M. and Nechev, Kamen S., "Silver Oxide-Metal Hydride Cell: Preliminary Performance and Analysis", The Electrochemical Society Proceedings Volume 94-27, pp. 381-392, (September 14, 2002).